

Draft Environmental Assessment

West Shore State Park Tree Thinning Project



December 2006



Draft Environmental Assessment MEPA, NEPA, MCA 23-1-110 CHECKLIST

West Shore Timber Thinning Project

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action:

The purpose of this action is to complete a forest-thinning project at West Shore State Park. The objective is to maintain the property over time for safe public use, with a forest cover that is healthy and insect, disease, and fire resistant. In consideration of fire behavior, tree crowns that are not touching will reduce the risk of stand replacement. A healthy stand, with a mixture of tree species native to the site with a diversity of tree sizes and ages, is the desired future condition. The long-term goal is to restore the site to the historic stand structure of large, open, park-like stands dominated by ponderosa pine and western larch, with some Douglas fir. The specific objectives of this project will be:

1. To remove hazardous, diseased, and dead or dying trees.
2. To open the under-story to promote the health of ponderosa pine.
3. To reduce stress on trees due to competition for light, water, and nutrients. That stress is resulting in increasing mortality due to the combined effects of dwarf mistletoe, root rot, and bark beetles.
4. To reduce fuel loads, ladder fuels, and the possibility of stand replacement fire in order to protect the park and adjacent private lands.

2. Agency Authority for the Proposed Action:

Montana Codes Annotated 23-1-101

3. Name of Project: West Shore Forest Thinning Project

4. Name, Address, and Phone Number of Project Sponsor (if other than the agency):

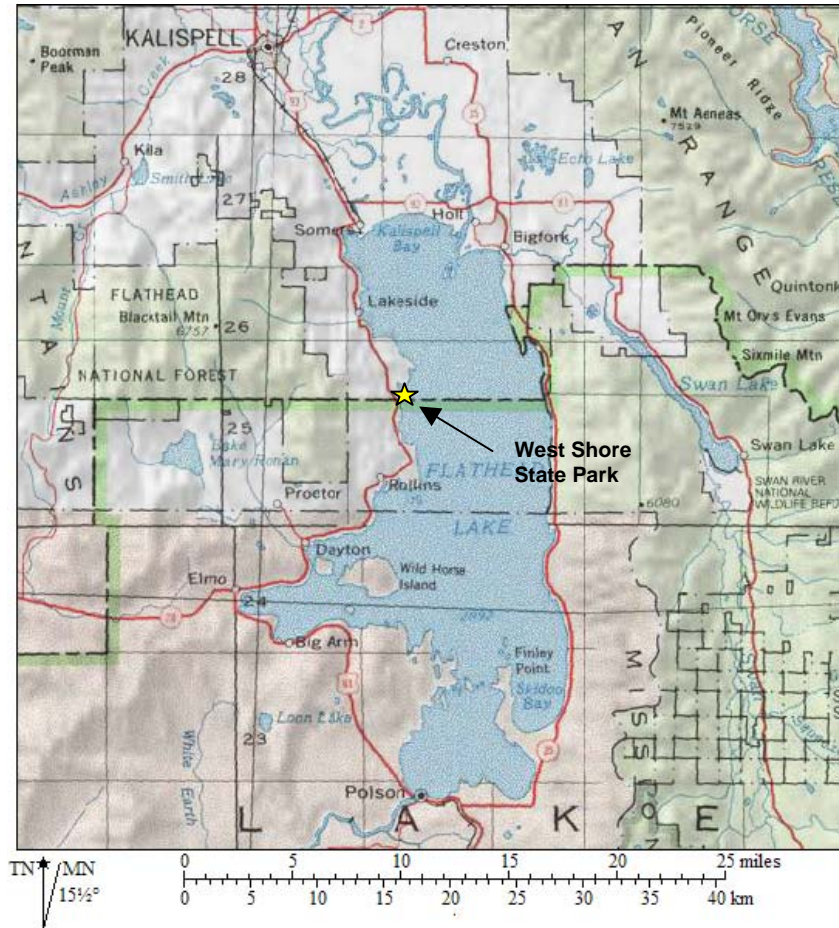
5. If Applicable:

Estimated Construction/Commencement Date:	2/1/2007
Estimated Completion Date:	5/1/2007
Current Status of Project Design (% complete):	50%

6. Location Affected by Proposed Action (county, range, and township):

Flathead Lake State Park, West Shore Unit
Lake County, T25N, R20W

WEST SHORE STATE PARK LOCATION MAP

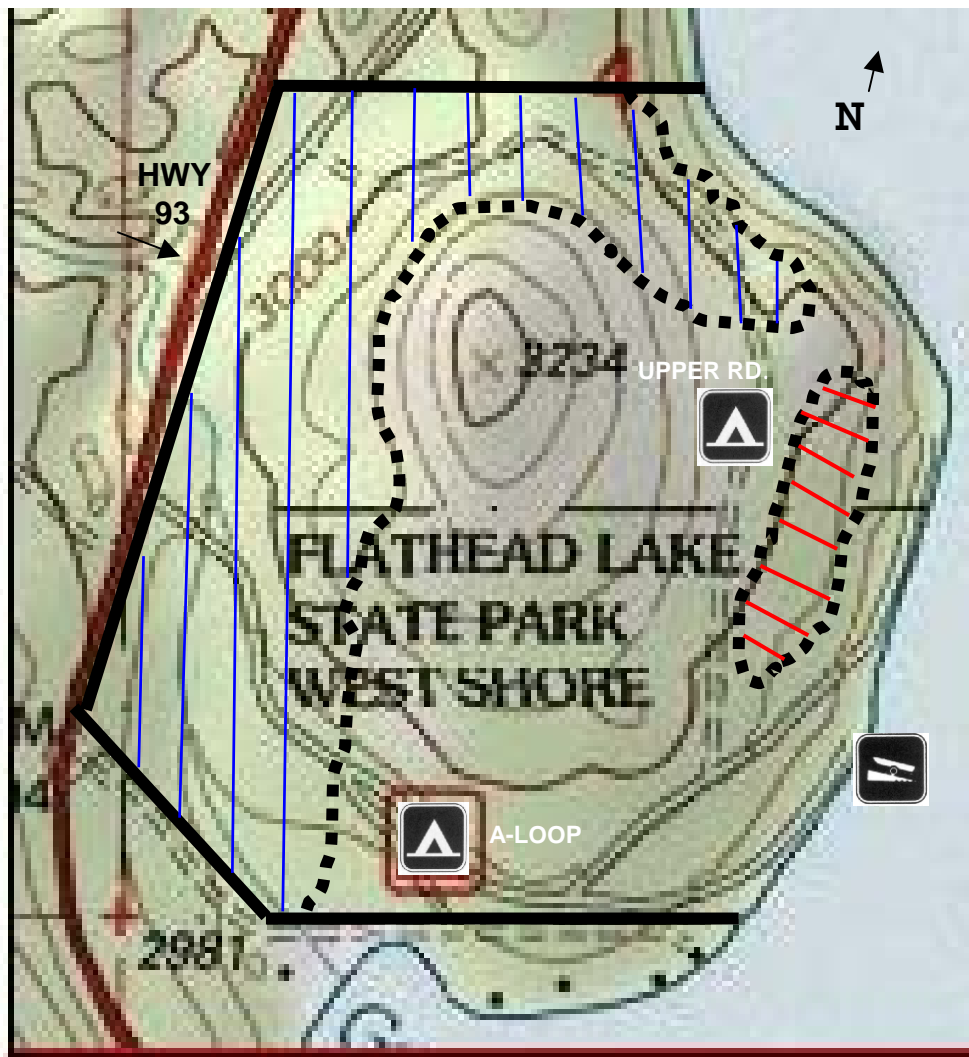


7. **Project Size: Estimate the number of acres that would be directly affected that are currently:**

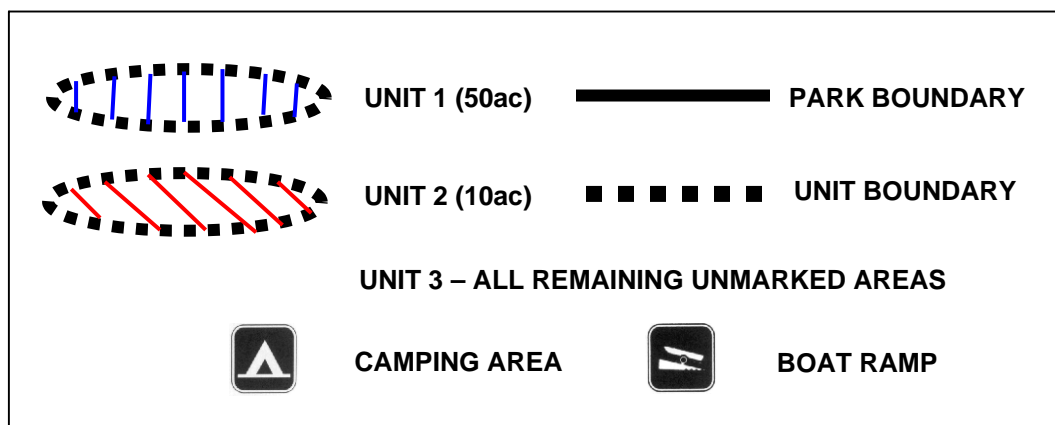
Acres		Acres	
(a) Developed:		(d) Floodplain.....	_____
residential.....	_____	(e) Productive:	
industrial.....	_____	irrigated cropland.....	_____
(b) Open Space/Woodlands/Recreation	_____	dry cropland.....	_____
		forestry.....	Up to 70-80
(c) Wetlands/Riparian Areas.....	_____	rangeland.....	_____
		other.....	_____

8. **Map/Site Plan: Attach an original 8½" x 11" or larger section of the most recent USGS 7.5' series topographic map showing the location and boundaries of the area that would be affected by the proposed action. A different map scale may be substituted if more appropriate or if required by agency rule. If available, a site plan should also be attached.**

WEST SHORE STATE PARK SITE PLAN



0 1000 FEET



9. Narrative Summary of the Proposed Action or Project, Including the Benefits and Purpose of the Proposed Action:

Flathead Lake State Park, West Shore Unit, is located south of Lakeside on the west shore of Flathead Lake and is surrounded by private property, both in large parcels and small housing lots. No forest management has been done at this site, other than hazardous tree removal, for at least 35 years. As a result portions of the existing forest are dense and overcrowded, with stands dominated by dog hair Douglas fir and lodgepole pine.

In 2003 Fish, Wildlife & Parks (FWP) contracted with a forester to look at the forest environment on all lands managed by FWP's Parks Division. The subsequent environmental assessment and Region One Vegetation and Hazard Tree Management Plan were adopted on September 3, 2003. In the assessment of FWP properties, West Shore State Park was identified as one of the priority sites for forest management. In the 2003 plan, the recommended treatment for this area was a group selection harvest favoring ponderosa pine and the thinning of dense Douglas fir stands to 25-30-foot spacing. Because the recommended prescription area at West Shore is over 10 acres, a separate environmental assessment is required before a treatment can be done in this area, hence this environmental assessment.

Due to the high tree density in certain areas of the park, competition for light, water, and nutrients is great. Combined with past drought conditions, the resultant overstocked stands are more susceptible to dwarf mistletoe, root rot, and bark beetles. The goal of the project is to maintain the property over time for safe public use, with a forest cover that is insect, disease, and fire resistant. Large, mature trees are desired as the general forest cover over time. Tree crowns and root systems need adequate site resources in order to resist insect and disease attack. Tree crowns that are not touching will have adequate site resources to grow and remain vigorous as well as provide a crown-fire-resistant stand. There will be an effort to maintain a diversity of specie sizes and ages of trees on the site to provide replacement as some large trees reach the end of their life cycle. In addition, consideration will be given to visual and noise buffers along the highway and the lakeshore. Only those trees determined to be hazardous or necessary for vista maintenance will be removed along the lakeshore. A long-term goal is to restore the site to the historic stand structure of large, open, park-like stands dominated by ponderosa pine, with western larch and some Douglas fir.

The preferred climax species for this site, given topography, elevation, soil type, and moisture requirements, would be ponderosa pine and western larch. Douglas fir are not the desired climax tree in a heavily used public recreational area, as they are susceptible to wind load due to their shallow root system and are not as fire or disease resistant. Therefore this project has been designed to reduce the density of Douglas fir to allow existing ponderosa pine and western larch to grow and remain healthy.

The specific objectives of this project will vary in different areas of the park; however, the primary objectives in all areas of the park will include:

1. Removal of hazardous, diseased, and dead or dying trees.

2. Reducing stress on trees due to competition for light, water, and nutrients. That stress is resulting in increasing mortality due to the combined effects of dwarf mistletoe, root rot, and bark beetles.
3. Reducing fuel loads, ladder fuels, and the possibility of crown fires in order to protect the park and adjacent private lands.

In Unit 1, the objective is to thin closely spaced, small-diameter trees. Tree crowns must be thinned to reduce the possibility of stand replacement fire. Fuel reduction can be accomplished by salvaging dead trees and thinning the stand using a general tree spacing guide of 20-30 feet between trees. Where there are old growth larch and ponderosa pine, the undergrowth thicket of fir and larch will be removed around the trees for 35-75 feet. This will protect the old growth trees by removing the ladder fuels that could carry a fire into the crown. It will also ensure they will have adequate water and nutrients and provide an open area so the ponderosa pine, which requires near full exposure to sunlight, will reproduce. Consideration will also be given to a buffer zone and feathering of the cut near park roads and Highway 93 to reduce noise and visual impacts. All existing live ponderosa pine will be left, while thinning the existing live Douglas fir. This will give the best trees increased light, water, and nutrients they need to resist insect and disease infestation.

In Unit 2, which is almost entirely dominated by Douglas fir, the objective is to ensure the trees will remain vigorous and grow to a large size, while improving the views to the lake from the upper road campsites. This thinning would leave the biggest and best trees on a 25-30-foot spacing guide.

In the remainder of the park (Unit 3), the objective will be to remove individual hazardous or diseased trees and those that need to be removed due to root or road issues and vista maintenance. These trees will be individually marked for removal. Some dead snags will be left for wildlife habitat in all units or areas of thinning.

Treatment will be implemented through a commercial thinning timber sale specifying mechanical harvesters, and logs and slash transported to designated loading or disposal areas. The commercial thinning will take place in the winter when the ground is frozen to minimize ground and vegetative disturbance. Native grass seeds will be sown in all areas of ground disturbance. Stumps will be cut to 4 inches or less. The commercial value of the excess trees on the site should cover the cost of completely disposing of the slash resulting from the harvested trees as well as the natural accumulation of excess ground fuels. Old growth and other desirable leave trees will be marked with orange ribbons by a professional forester to prevent felling. The stand marked for thinning will be available for public review prior to seeking bids.

Precautions will be taken to close roads during the project to prevent vehicles from entering. Signs will be prominently displayed informing visitors of the project and hazardous conditions. Areas will be closed to public access while work is being performed and machinery is operated or if conditions are deemed unsafe.

See Appendix A for the complete prescription for West Shore State Park.

10. Listing of Any Other Local, State, or Federal Agency That Has Overlapping or Additional Jurisdiction:

(a) Permits:

<u>Agency Name</u>	<u>Permit</u>	<u>Date Filed/#</u>
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(b) Funding:

<u>Agency Name</u>	<u>Funding Amount</u>
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(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
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Montana State Historical Preservation Office	Archeological & Cultural Site Protection
Lake County Planning Department	Planning and Zoning
Department of Environmental Quality	Air Quality (Jan.-Mar.)

11. List of Agencies Consulted During Preparation of the EA:

MT Department of Natural Resources and Conservation
MT Fish, Wildlife & Parks
 Parks Division
 Wildlife Division
 Fisheries Division
 Legal Bureau
Montana State Historic Preservation Office (SHPO)
Montana Department of Commerce – Tourism

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the impacts of the proposed action, including secondary and cumulative impacts on the physical and human environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
>a. Soil instability or changes in geologic substructure?			x		y	1a
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			x		y	1b
>c. Destruction, covering, or modification of any unique geologic or physical features?		x				
d. Changes in siltation, deposition, or erosion patterns that may modify the channel of a river or stream, or the bed or shore of a lake?			x		y	1d
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		x				
f. Other (list)						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

1a, b, and d: Timber removal will be done during the winter to minimize ground disturbance, compaction, erosion, and siltation. If possible, any slash burning will be done using a burning boat to reduce impacts on vegetation and soils. Any disturbed areas will be reseeded with native grasses to reduce erosion and compaction. Any invading noxious weeds will be managed through the Regional Noxious Weed Program.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. <u>AIR</u> Will the proposed action result in:	IMPACT [⊙]				Can Impact Be Mitigated [⊙]	Comment Index
	Unknown [⊙]	None	Minor [⊙]	Potentially Significant		
➤a. Emission of air pollutants or deterioration of ambient air quality? (Also see 13c.)			x		N	2a
b. Creation of objectionable odors?			x		N	2b
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		x				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		x				
◆e. For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		x				
f. Other						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

2a and b: Machinery used during the timber removal project will create noise and emissions. This project will be done in the winter to lessen disturbance. In addition, care will be taken to limit working hours to minimize disturbance to adjacent neighbors. Burning of slash will result in temporary effects on air quality. All burning will occur during periods when conditions are suitable for good air dispersion.

2e. All applicable air shed or burning permits will be acquired before any burning takes place.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



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3. <u>WATER</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Discharge into surface water or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?			x		Y	3a
b. Changes in drainage patterns or the rate and amount of surface runoff?		x				
c. Alteration of the course or magnitude of floodwater or other flows?		x				3c
d. Changes in the amount of surface water in any water body or creation of a new water body?		x				
e. Exposure of people or property to water-related hazards such as flooding?		x				
f. Changes in the quality of groundwater?		x				
g. Changes in the quantity of groundwater?		x				
h. Increase in risk of contamination of surface or groundwater?		x				
i. Effects on any existing water right or reservation?		x				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		x				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		x				
♦♦1. For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.)		x				
♦m. For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		x				
n. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

3a. The majority of this project will take place away from Flathead Lake. No trees will be removed along the shoreline except those determined to be hazardous to developed sites. In any area treated near the lake, Best Management Practices will be followed. All disturbed areas will be reseeded with native seed to reduce chances for erosion. Best Management Practices available online at <http://www.deq.state.mt.us/wqinfo/nonpoint/BMP-2004Clean.pdf>.

3c. Due to ground disturbance there is a possibility of soil erosion in disturbed areas. Disturbed areas will be reseeded with native vegetation to ensure erosion does not occur. If erosion does occur due to heavy spring rains, steps will be taken to reduce or eliminate that erosion through the use of straw bails, netting, or other erosion barriers to limit runoff.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



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4. <u>VEGETATION</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Changes in the diversity, productivity, or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			x		N	4a
b. Alteration of a plant community?			x		N	4b
c. Adverse effects on any unique, rare, threatened, or endangered species?		x				
d. Reduction in acreage or productivity of any agricultural land?		x				
e. Establishment or spread of noxious weeds?			x		Y	4e
♦♦f. For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		x				
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

4a and b: One of the goals of this project is to change the tree habitat types to include more ponderosa pine and less Douglas fir. The impacts are considered positive, as this will reduce dense areas to more historic levels thereby improving the health and vigor of remaining trees. This will make them more resistant to insect and disease infestations and reduce the risk of stand replacement fire. With the reduction of overhead cover, existing undergrowth is anticipated to regenerate. Where little undergrowth is present, opened, disturbed areas will be reseeded with native species.

4e: There is a possibility for the introduction of noxious weeds in disturbed soils. Disturbed soils will be reseeded with native vegetation and monitored.

The area is managed under Region One's noxious weed management program, and any occurrence of noxious weeds will be treated chemically, biologically, or mechanically under that program.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

5. <u>FISH/WILDLIFE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		x				
b. Changes in the diversity or abundance of game animals or bird species?			x		N	5b
c. Changes in the diversity or abundance of nongame species?			x		N	5c
d. Introduction of new species into an area?		x				
e. Creation of a barrier to the migration or movement of animals?		x				
f. Adverse effects on any unique, rare, threatened, or endangered species?		x				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest, or other human activity)?		x				
♦♦h. For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		x				
♦i. For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		x				
j. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

5b and c: With the change in tree density, there may be some minor impacts to the types or diversity of bird species in this particular park. Effect on the overall bird types or densities in the area will be insignificant. An FWP biologist was consulted during the writing of the prescription for this property in order to minimize impacts to wildlife species. Biologists will also be involved in reviewing the prescription as laid out on the ground.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Increases in existing noise levels?			x		Y	6a
b. Exposure of people to severe or nuisance noise levels?			x		Y	6b
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		x				
d. Interference with radio or television reception and operation?		x				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

6a and b: Machinery used during the timber removal project will create noise and emissions. This project will be done in the winter to lessen disturbance. Workers will be exposed to intermittent noise levels that will require use of hearing protection.

In addition, care will be taken to limit working hours to minimize disturbance to adjacent neighbors. Along Highway 93 consideration will be given to a feathered approach to maintain a visual and noise buffer between the highway and recreation sites.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		x				
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		x				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		x				
d. Adverse effects on or relocation of residences?		x				
e. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

7a-e. No impacts are anticipated to land uses as described above.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT [⚙]				Can Impact Be Mitigated [⚙]	Comment Index
	Unknown [⚙]	None	Minor [⚙]	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			x		Y	8a
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		x				
c. Creation of any human health hazard or potential hazard?			x		Y	8c
♦d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a.)		x				
e. Other:						8e

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

8a: The vehicles utilized during the timber removal use oil and gas. Care will be taken to prevent spills.

8c: The removal of timber can be hazardous, with falling trees and the use of heavy equipment. The site will be closed to the public while the work is being done. Signs will be prominently displayed informing visitors of the project and hazardous conditions. Areas will be closed to public access while work is being performed and machinery is operated or if conditions are deemed unsafe. Professional personnel, knowledgeable in safety practices and procedures to protect themselves, will be used while completing this work. People with respiratory illness could experience a temporary health hazard resulting from smoke. Burning during the period of lowest visitation and when weather conditions are most favorable would mitigate this hazard. All applicable air shed and burn permits would be obtained.

8e. Follow-up monitoring of and treatment of disturbed areas for noxious weeds may result in the use of herbicides for control and eradication. Two types of chemicals are currently used by FWP. One is Weedmaster, a 2-4D compound for broadleaf control, and Eraser, a nonselective herbicide. Both have moderate toxicity ratings and are safe to humans entering an area once the liquid has dried. Warning flags will be placed at any location where there is a likelihood that visitors could walk through a treated area.



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Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		x				
b. Alteration of the social structure of a community?		x				
c. Alteration of the level or distribution of employment or community or personal income?		x				9c.
d. Changes in industrial or commercial activity?		x				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		x				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

9c. There are no anticipated impacts to the community as a whole from this project. However, work will be performed by contract, which will benefit the selected business and result in additional income to those involved with the project.



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Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



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10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		x				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		x				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electrical power, natural gas, other fuel supply or distribution systems, or communications?		x				
d. Will the proposed action result in increased use of any energy source?		x				
e. Define projected revenue sources.						10e.
f. Define projected maintenance costs.						10f.
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

10e. It is anticipated that the sale of timber harvested will provide funding for the project.

10f. Annual maintenance costs will be determined by the extent of any invasive weeds in disturbed areas. All areas could be treated in two to three days by one to two seasonal staff. If treatment is necessary, the projected cost is estimated to be \$600 per year for chemicals and labor in the first two years, with costs decreasing in subsequent years as native species regenerate and become dominant.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of any scenic vista, or creation of an aesthetically offensive site or effect that is open to public view?			x		N	11a
b. Alteration of the aesthetic character of a community or neighborhood?			x		N	11b
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach tourism report.)			x		N	11c
d. For P-R/D-J, will any designated or proposed wild or scenic rivers, trails, or wilderness areas be impacted? (Also see 11a, 11c.)		x				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

11a, b, and c: The timber removal at this site will alter the current look of the area in certain areas of the park by replacing a closed, forested environment with a more open one. Disturbance from a logging operation will take one to two years to recover. In disturbed areas, seeding will occur with native grasses to lessen these impacts. Stumps will be cut to ground level where feasible to lessen visual impacts. If possible, burning boats will be used to eliminate burn piles and limit large, bare areas due to slash burning.

In Unit 1, consideration will be given to a buffer along Highway 93, which will be feathered into the prescription area to reduce visual and noise impacts for state park users. In all units, efforts will be taken to keep visual impacts to a minimum. Although the thinning will result in a visual alteration, it is considered a positive effect and not a significant impact to the forest community due to the return of more natural historic tree densities and species dominance. The Parks Division mandate is to manage park areas in as near a natural condition as possible. This project is intended to help restore historic specie type and stand densities. Benefits include reduced fuel loads and the lowering of the risk of stand replacement fire.

There will be no impact on tourism opportunities at the site. See Appendix B for the Tourism Report.



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Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT [⚙]				Can Impact Be Mitigated [⚙]	Comment Index
	Unknown [⚙]	None	Minor [⚙]	Potentially Significant		
➤a. Destruction or alteration of any site, structure, or object of prehistoric, historic, or paleontological importance?		x				
b. Physical change that would affect unique cultural values?		x				
c. Effects on existing religious or sacred uses of a site or area?		x				
♦♦d. <u>For P-R/D-J</u> , will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12a.)		x				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

12a-e. No effects on historical or cultural resources are anticipated. State archeological and cultural specialists will be consulted prior to the start of the project. See Appendix C for State Historic Preservation Clearance Letter.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

C. SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole,:	IMPACT				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources, which create a significant effect when considered together or in total.)		x				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?			x		Y	13b
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard, or formal plan?		x				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		x				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		x				
♦f. For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)		x				
♦♦g. For P-R/D-J, list any federal or state permits required.						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

13b: Timber removal is hazardous. Precautions will be taken to close roads during the project to prevent vehicles from entering. Signs will be prominently displayed informing visitors of the project and hazardous conditions. Areas will be closed to public access while work is being performed and machinery is operated or if conditions are deemed unsafe.



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM).



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

PART II. ENVIRONMENTAL REVIEW (CONTINUED)

1. Description and analysis of reasonable alternatives (including the no-action alternative) to the proposed action, whenever alternatives are reasonably available and prudent to consider, and a discussion of how the alternatives would be implemented:

Alternative A: No action.

Action: FWP would not do forest management at West Shore and let the natural progression take place.

Impacts: Dense stands of predominantly Douglas fir would be less vigorous and continue to be more susceptible to fir beetle, dwarf mistletoe, and root rot. Competition for nutrients and moisture would result in many trees dying out.

Dead and dying trees would add fuel loads in the park, increasing the likelihood of stand replacement fire. Deadfall and ladder fuels would increase the possibility of a crown fire, which could threaten adjacent properties.

Because beetle-infested trees will not be removed, beetles will continue to disperse from currently impacted trees, causing more trees to be attacked, with potential spillover to trees on adjacent lands.

Dead and dying trees could become hazardous to recreational users near developed areas.

The long-term aesthetics of the park will be impacted. As ponderosa pine are smothered due to lack of light, they will die, leaving Douglas fir the predominant species. Since the forest cover will remain dense, little new tree growth will be generated in the understory. This will lead to a homogenous forest of one age class, which reduces diversity and is more at risk to stand replacement events.

Alternative B: Complete Unit One and remove identified hazardous and diseased trees only.

Action: This alternative would address the major concerns at the park by treatment of approximately 50 acres of the dense, small-diameter trees along Highway 93 and property boundaries to the south and north. It would provide conditions for more vigorous growth of remaining trees and reduce fuel loads. The alternative would remove dead and dying trees from the park, leaving the remaining trees more resistant to insect and disease infestation. The dwarf mistletoe trees would be removed to slow the spread of that parasite. Some snags would be left for wildlife habitat. Efforts will be made to provide a buffer between the highway and the park interior through a feathering approach that leaves the boundaries of the park more dense to help mitigate noise and reduce visual clutter.

The drawback to this alternative is that it would not address the dense Douglas fir stand (Unit 2) between the upper road campground and Flathead Lake. If a fire started down-slope of this

area, the steep terrain would be conducive to the spread of the fire through the campground, thereby placing visitors and their property at risk.

Additionally, regarding species diversity, because space would not be opened up around the few ponderosa pine in other areas of the park, regeneration of this species would not be achieved elsewhere. A continuation of the single age-class monoculture of fir would continue in these locations.

Finally, if this alternative were selected, there would be virtually no view of the lake from the campground. This is an attribute that is highly desirable in this type of recreational setting.

Alternative B would be implemented through a timber-thinning contract as described in the last paragraph of Section 9, Narrative Summary.

Alternative C – Preferred Alternative: Complete the prescription as recommended in Units 1, 2, and 3.

Action: Follow the attached prescription.

In addition to the impacts of thinning Unit 1, this alternative would also address treatment of Unit 2 below the upper road camping area. It would also allow for removal of hazardous and selected trees in the A-loop campground to reduce fuel loads and allow for more vigorous tree growth. Additionally, it would allow for removal of a few trees for vista maintenance at the park's designated viewpoint and for removal of selected hazardous trees or those whose roots may affect road surfacing or facility integrity.

This alternative would address the Unit 2 concerns of tree density and fuel loads and the heightened risk of a fire spreading rapidly up the slope and through the camping area. It would also allow for a limited view of the lake from the upper road.

Fir beetle, dwarf mistletoe, and root rot will be reduced, and the remaining trees will be more resistant to them. With removal of the beetle-infested trees, bark beetle outbreaks will be reduced. Over time the forest cover will become more vital, and fire and wind resistant. A mixture of tree species, sizes, and ages will be achieved. Over an extended period of time the site will be restored to a large, more historic, open stand dominated by ponderosa pine, with a mix of western larch and some Douglas fir.

Because crown density and fuel loads will be reduced, the risk of stand replacement fire will be lowered. Ponderosa pine, which is highly resistant to ground fires, will not be negatively affected, and adjacent private lands would not be jeopardized. This alternative will open up space around remaining ponderosa pine, allowing for more vitality and regeneration. These trees will resist disease and insects better and will propagate more ponderosa pine in this site. The diversity and age class structure will be enhanced, with a mixture of tree species, sizes, and ages to provide replacement trees as some large trees die off over time.

Finally, liability for the state will be reduced since hazardous conditions including fuel reduction and visitor and facility safety will be addressed.

This alternative would be a continuation of the thinning contract as described previously.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The project will be completed during the winter to lessen disturbance to the forest floor and to park visitors and adjacent neighbors. Work will occur during normal business hours, Monday through Friday, 8 a.m. - 5 p.m.

To lessen aesthetic impacts, stumps will be cut to ground level (4 inches or less) in all areas. Stumps will be removed or ground up in high visibility locations.

Thinning and slash disposal operation will be conducted in one of the following manners, in order of desirability, with the final decision based on financial feasibility, and environmental and recreational impacts:

1. Thin, chip, and haul all slash from the site in the winter when snow and frozen ground are present.
2. Thin and progressively burn slash during open burning season using a burning boat.
3. Thin and progressively burn the slash during the open burning season using two to four designated burning spots.
4. Thin and pile the slash in two to four designated burning spots in winter to be burned during spring open-burning period.

Best Management Practices will be followed. Accredited loggers will be solicited for bids. The bidder will submit an operation plan specifying proposed slash disposal methods and equipment to be used. The successful bidder will be awarded the contract based on an evaluation of his operating plan as well as a stumpage price, if any.

Equipment use will be no larger than necessary to complete the project in a timely manner.

Any soil that is disturbed will be reseeded with a native grass mix.

The area will be incorporated into the Region's noxious weed management program, with close attention to the invasion of noxious weeds in disturbed areas.

Fish, Wildlife & Parks biologists have been involved in writing the prescription and will be involved during the marking and logging processes.

PART III. NARRATIVE EVALUATION AND COMMENT

1a, b, and c: Timber removal will be done during the winter to minimize ground disturbance, compaction, erosion, and siltation. If possible, any slash burning will be done using a burning

boat to reduce impacts on vegetation and soils. Any disturbed areas will be reseeded with native grasses to reduce erosion and compaction. Any invading noxious weeds will be managed through the Regional Noxious Weed Program.

2a and b: Machinery used during the timber removal project will create noise and emissions. This project will be done in the winter to lessen disturbance. In addition, care will be taken to limit working hours to minimize disturbance to adjacent neighbors. Burning of slash will result in temporary effects on air quality. All burning will occur during periods when conditions are suitable for good air dispersion.

2e. All applicable air shed or burning permits will be acquired before any burning takes place.

3a. The majority of this project will take place away from Flathead Lake. No trees will be removed along the shoreline except those determined to be hazardous to developed sites. In any area treated near the lake, Best Management Practices will be followed. All disturbed areas will be reseeded with native seed to reduce chances for erosion.

3c: Due to ground disturbance there is a possibility of soil erosion in disturbed areas. Disturbed areas will be reseeded with native vegetation to ensure erosion does not occur. If erosion does occur due to heavy spring rains, steps will be taken to reduce or eliminate that erosion through the use of straw bails, netting, or other erosion barriers to limit runoff.

4a and b: One of the goals of this project is to change the tree habitat types to include more ponderosa pine and less Douglas fir. The impacts are considered positive, as this will reduce dense areas to more historic levels thereby improving the health and vigor of remaining trees. This will make them more resistant to insect and disease infestations and reduce the risk of stand replacement fire. With the reduction of overhead cover, existing undergrowth is anticipated to regenerate. Where little undergrowth is present, opened, disturbed areas will be reseeded with native species.

4e: There is a possibility for the introduction of noxious weeds in disturbed soils. Disturbed soils will be reseeded with native vegetation and monitored.

The area is managed under Region One's noxious weed management program, and any occurrence of noxious weeds will be treated chemically, biologically, or mechanically under that program.

5b and c: With the change in tree density, there may be some minor impacts to the types or diversity of bird species in this particular park. Effect on the overall bird types or densities in the area will be insignificant. An FWP biologist was consulted during the writing of the prescription for this property in order to minimize impacts to wildlife species. Biologists will also be involved in reviewing the prescription as laid out on the ground.

6a and b: Machinery used during the timber removal project will create noise and emissions. This project will be done in the winter to lessen disturbance. Workers will be exposed to intermittent noise levels that will require use of hearing protection.

In addition, care will be taken to limit working hours to minimize disturbance to adjacent neighbors. Along Highway 93 consideration will be given to a feathered approach to maintain a visual and noise buffer between the highway and recreation sites.

7a-e. No impacts are anticipated to land uses as described above.

8a: The vehicles utilized during the timber removal use oil and gas. Care will be taken to prevent spills.

8c: The removal of timber can be hazardous, with falling trees and the use of heavy equipment. The site will be closed to the public while the work is being done. Professional personnel knowledgeable in safety practices and procedures to protect themselves will be used while completing this work. People with respiratory illness could experience a temporary health hazard resulting from smoke. Burning during the period of lowest visitation and when weather conditions are most favorable would mitigate this hazard. All applicable air shed and burn permits would be obtained.

8e. Follow-up monitoring of and treatment of disturbed areas for noxious weeds may result in the use of herbicides for control and eradication. Two types of chemical are currently used by FWP. One is Weedmaster, a 2-4D compound for broadleaf control, and Eraser, a nonselective herbicide. Both have moderate toxicity ratings and are safe to humans entering an area once the liquid has dried. Warning flags will be placed at any location where there is a likelihood that visitors could walk through a treated area.

9c. There are no anticipated impacts to the community as a whole from this project. However, work will be performed by contract, which will benefit the selected business and result in additional income to those involved with the project.

10e. It is anticipated that the sale of timber harvested will provide funding for the project.

10f. Annual maintenance costs will be determined by the extent of any invasive weeds in disturbed areas. All areas could be treated in two to three days by one to two seasonal staff. If treatment is necessary, the projected cost is estimated to be \$600 per year for chemicals and labor in the first two years, with costs decreasing in subsequent years as native species regenerate and become dominant.

11a, b, and c: The timber removal at this site will alter the current look of the area in certain areas of the park by replacing a closed, forested environment with a more open one. Disturbance from a logging operation will take one to two years to recover. In disturbed areas, seeding will occur with native grasses to lessen these impacts. Stumps will be cut to ground level where feasible to lessen visual impacts. If possible, burning boats will be used to eliminate burn piles and limit large, bare areas due to slash burning.

In Unit 1, consideration will be given to a buffer along Highway 93, which will be

feathered into the prescription area to reduce visual and noise impacts for state park users. In all units, efforts will be taken to keep visual impacts to a minimum. Although the thinning will result in a visual alteration, it is considered a positive effect and not a significant impact to the forest community due to the return of more natural historic tree densities and species dominance. The Parks Division mandate is to manage park areas in as near a natural condition as possible. This project is intended to help restore historic specie type and stand densities. Benefits include reduced fuel loads and the lowering of the risk of stand replacement fire.

There will be no impact on tourism opportunities at the site. See Appendix B for the Tourism Report.

12a. No effects on historical or cultural resources are anticipated. No known cultural resources have been identified in the areas of thinning. State archeological and cultural specialists will be consulted prior to the start of the project.

13b: Timber removal is hazardous. Precautions will be taken to close roads during the project to prevent vehicles from entering. Signs will be prominently displayed informing visitors of the project and hazardous conditions. Areas will be closed to public access while work is being performed and machinery is operated or if conditions are deemed unsafe.

PART IV. EA CONCLUSION SECTION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:**

Based on the level of impacts and anticipated public comment, an environmental assessment is the proper level of analysis on this project.

- 2. Describe the level of public involvement for this project, if any, and given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances:**

The public will be notified in the following manners to comment on this current EA, the proposed action and alternatives:

- Two public notices in each of these papers: *Helena Independent Record*, *Daily Inter Lake*, and the *Lake County Leader*;
- One statewide press release; and
- Public notice on the Fish, Wildlife & Parks web site: <http://fwp.mt.gov>.

Copies of this environmental assessment will be available to the neighboring landowners and interested parties to ensure their knowledge of the proposed project.

Fred Hodgeboom, the forester hired by FWP, will meet with interested parties at West Shore to conduct tours of the proposed project on Tuesday, January 16, and again on Tuesday, January 23, 2007, at 10:00 a.m. Meeting place will be the upper boat trailer parking lot. One portion of the thinning area will be marked so that the public can better assess the proposed project.

This level of public notice and participation is appropriate for a project of this scope, having minor impacts, many of which can be mitigated.

During the internal review period, the environmental assessment and prescription was sent to the Department of Natural Resources and Conservation for comment and recommendations.

3. Duration of comment period, if any:

There will be a 30-day public comment period. Written comments will be accepted until 5:00 p.m., Wednesday, February 7, 2007, and can be mailed to the following address:

West Shore State Park Forest Thinning Project
Montana Fish, Wildlife & Parks
Region 1 Headquarters
490 N. Meridian Road
Kalispell, MT 59901

Or email comments to: jsawyer@mt.gov

4. Name, title, address, and phone number of the person(s) responsible for preparing the EA:

Jerry Sawyer, Park Manager, Flathead Lake State Park
Fish, Wildlife & Parks
490 N. Meridian Road
Kalispell, MT 59901
(406) 752-0007
jsawyer@mt.gov

APPENDIX A

WEST SHORE STATE PARK FOREST HEALTH AND FIRE HAZARD REDUCTION PRESCRIPTION

LOCATION: West Shore State Park, approximately 140 acres, is located about 5 miles south of Lakeside, MT, located between US Hwy 93 and Flathead Lake, SW ¼, Sec. 4, T26N, R21W, Lake County, MT.

DESIRED FUTURE CONDITION (GOAL): The MT Department of Fish Wildlife and Parks (DFWP) desires to maintain the property over time for safe public use with a forest cover that is healthy, and fire and wind resistant. Large mature trees are desired as the general forest cover over time. Tree crowns and root systems need adequate site resources (sun, water, soil nutrients) in order to resist insect and disease attack. Tree crowns that are not touching will have adequate site resources to grow and remain healthy as well as providing a crown fire resistant stand or community of trees. A healthy stand will have a mixture of tree species native to the site. There will be some diversity of tree sizes and ages on the site to provide replacements as some large trees die over time. A long-term goal is to restore the site to the historic stand structure of large open park-like stands dominated by ponderosa pine, western larch, and some Douglas-fir.

EXISTING CONDITION: Existing stands are characterized by lack of disturbance for 7 decades. The steep east, south and west facing slopes in the center of the park has naturally open, widely space Douglas fir that is growing well and has little evidence of insect or diseases. The gentle slopes and benches around the edges of the property have denser stands of 70 year old Douglas-fir and larch with some remnant old growth trees that survived the last fire 70-80 years ago. There has been considerable mortality in the overcrowded fir and in the scattered lodgepole pine on the west boundary.

The stands dominated by Douglas-fir are still young and vigorous enough that extensive infections of disease and insects are not yet a problem even though there is some present in the stands. Douglas-fir is especially prone to several species of root rot. Root rot is caused by a fungus that kills the roots of a tree often killing the tree by weakening the tree so that it is vulnerable to bark beetle attack and windthrow. Douglas-fir bark beetle is a beetle adapted to specifically attack Douglas-fir. The bark beetle can detect which Douglas-fir trees are under stress by the organic compounds evaporating from the tree. By zeroing in on stressed trees that are deprived of water by effects of dwarf mistletoe, root rot, and drought, hundreds of adult beetle bore into the tree and tunnel between the bark and wood while laying eggs. The eggs hatch and thousands of grub worms begin to feed on the cambium of the tree. The adult beetle and larval galleries girdle the tree and deprive the crown of food and water to kill the tree.

Douglas-fir are exceptionally vulnerable to the combined effects of dwarf mistletoe, root rot, bark beetles and drought. It is usually difficult to attribute the cause of death to a single pathogen or cause. Multiple agents of change are almost always there. Competition for site resources from excess Douglas-fir is stressing the surviving ponderosa pine causing them to be more vulnerable to bark beetle attack. In addition to the wide array of pests

affecting Douglas-fir, lower limbs persist long after they die from lack of sun often providing a ladder of dead limbs that allows a fire to easily spread into the thick upper crowns. Stands with heavy composition of Douglas-fir are more prone to severe crown fires than stands of ponderosa pine and larch. When Native American and natural fires burned valley sites like West Shore regularly, these same traits caused the fires to kill the young Douglas-fir and favored the survival of ponderosa pine and larch. Ponderosa pine and larch are more resistant to all of the agents of change than Douglas-fir, so they are better choices for recreation site tree cover when available.

The biologic factors described above are resulting in accumulating ground fuels due to weather breakage of mistletoe weakened, abnormally branched trees, and dense tree crowns capable of carrying catastrophic crown fires. Due to the density of Douglas-fir under and around surviving ponderosa pine, if a fire were to get started, a crown fire will almost certainly result, and would cause the destruction of the ponderosa pine.

These stand conditions are prevalent on the west and north boundaries of the park. A fire start near the highway that has a powerline could rapidly develop into a crown fire in severe burning conditions, threatening the developed sites and adjacent private property. These existing conditions of continuous dense forests full of dead material and ladder fuels are not stable long-term conditions due to high risk of complete destruction by catastrophic fire. A desired condition of a restored natural stand structure of open grown healthy mature/old growth trees resistant to fire, insects and disease must be maintained by periodic biomass removal.

Commercial logging along with required slash disposal is the only cost effective way to manage the accumulation of biomass which research has shown to have an average energy equivalent to 300 gallon of gasoline per acre per year. Thinning only small trees in the understory is extremely costly, only produces a small short term fire control benefit, and makes little change in the potential for a catastrophic wind driven crown fire (Fiedler, Carl, et. al., 2001. A Strategic Assessment of Fire Hazard in Montana. University of Montana, School of Forestry, September 29, 2001.). Prescribed burning without associated removal of excess biomass is extremely costly and presents a high liability risk.

SITE SPECIFIC PRESCRIPTION: Unit 1. Recommend treating approximately 50 acres along the west and north boundary (see map) with a variable commercial thinning and fuel reduction. Tree crowns must be thinned out to reduce the possibility of fire racing from crown to crown and ground fuels must be reduced. Fuel reduction can be accomplished by salvaging dead trees and thinning the stand using a general tree spacing guide of 20-30 feet between trees. Where there are old growth larch and ponderosa pine, the undergrowth thicket of fir and larch should be removed around these trees for 35-75 feet. This will protect the old growth trees by removing the fuel ladder that could carry a fire into their crown. It will also ensure they will have adequate water and nutrients and it will provide an open area so that the pine will reproduce. Ponderosa must have nearly full sunlight to germinate and grow.

All existing live ponderosa pine will be left, while thinning the existing live Douglas-fir as described above. This will give the best trees increased light, water, and nutrients they need to resist insect and disease attack and become more resistant to wind.

Sound snags that are not a safety hazard will be left standing for bird habitat and any large

rotting logs will be left on the ground.

The ponderosa pines are currently in good condition, however beetles are on the increase with one large ponderosa in the South campground killed in summer of 2006 by beetles.

Unit 2. This is an optional unit (approx.10 acres) that is almost entirely overly dense Douglas-fir. The stand is still pretty vigorous and could grow another 20 years before becoming prone to root rot and bark beetles. The unit lies on a bench below the new campground. The crowns of this stand help block the view to the lake from the camping spots and road. A commercial thinning at this time would ensure the crop trees would remain vigorous and grow to a large size while improving the views to the lake from the new campground. This thinning would leave the biggest and best tree on a 25-30 foot spacing guide.

Unit 3. The balance of the park is predominately vigorous Douglas-fir that needs no treatment beyond routine maintenance of dead tree removal. Sanitation and salvage of existing dead and high risk trees could be done by the operator while his equipment is on site as an optional negotiated hourly job if the contractor is agreeable.

IMPLEMENTATION: The treatment will be implemented through a commercial thinning timber sale specifying mechanical harvesters and transport logs and slash to designated loading or disposal areas. The commercial thinning will take place in the winter when the ground is frozen to minimize ground and vegetative disturbance. Native grass seeds will be sewn in all areas of ground disturbance. Stumps will be cut to ground level in all areas with heavy recreation traffic. The commercial value of the excess trees on the site should cover the cost of completely disposing of the slash resulting from the harvested trees as well as the natural accumulation of excess ground fuels. The leave trees will be marked with orange ribbons by a professional forester. The stand marked for thinning will be available for public review prior to seeking bids.

The thinning and slash disposal operation will be conducted in one of the following alternatives in order of desirability, with the final decision based on financial feasibility, and environmental and recreational impacts:

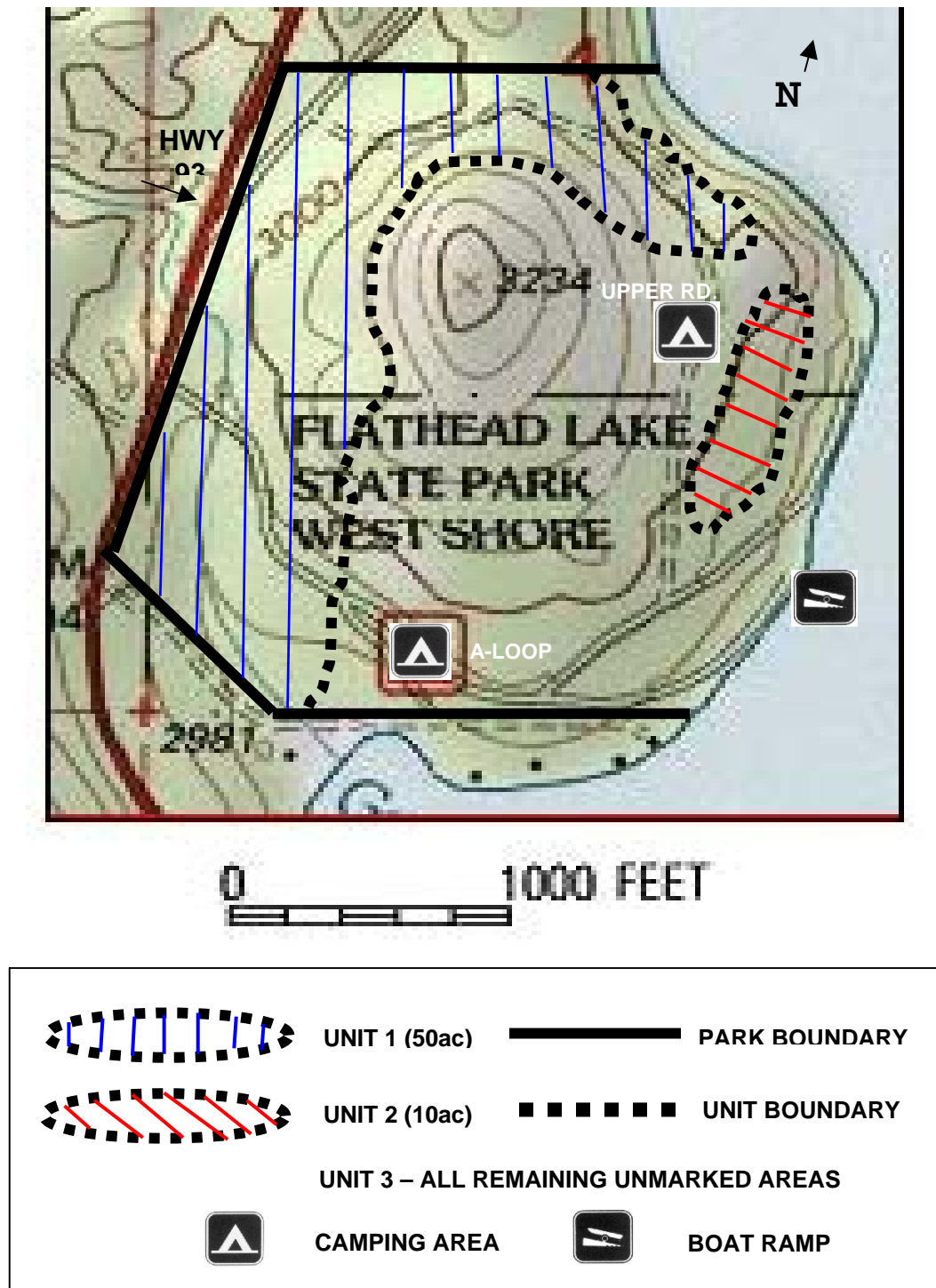
- A. Remove/salvage dead trees, thin and chip and haul all slash from site in winter (January/February 2007) with snow and frozen ground (Stone Container has such equipment).
- B. Remove/salvage dead trees, thin and progressively burn the slash during the open burning season in March 2007 using a burning boat.
- C. Remove/salvage dead trees, thin and progressively burn the slash during the open burning season March 2007 using designated burning area on old Highway on west boundary.

The above specifications will be sent to several Montana Logging Association accredited loggers soliciting bids on the thinning and dead tree removal job. Bidder will submit an Operation Plan specifying proposed slash disposal methods and equipment to be used. The successful bidder will be awarded based on evaluation of his operating plan as well as a stumpage price if any. Any excess value of the trees removed over costs will go to the Real Property Trust. The interest

from the Real Property Trust is used for Fish, Wildlife and Parks Operations and Maintenance.

Submitted by: Fred D. Hodgeboom, Forester

SITE PLAN MAP



APPENDIX B

Tourism Report – pending; will be added prior to any decision notice; however, no significant impacts are anticipated based upon tourism reports from previous 2005 park project and upcoming '07 capital project.

APPENDIX C

Ivy, Nancy

From: Murdo, Damon
Sent: Monday, December 18, 2006 11:42 AM
To: Ivy, Nancy
Subject: RE: SHPO request form

December 18, 2006

Nancy Ivy
FWP

RE: WEST SHORE STATE PARK TIMBER THINNING PROJECT. SHPO Project #: 2006121805

Dear Nancy:

I have conducted a cultural resource file search for the above-cited project located in Section 4, T25N R20W. According to our records there have been no previously recorded sites within the designated search locales. The absence of cultural properties in the area does not mean that they do not exist but rather may reflect the absence of any previous cultural resource inventory in the area, as our records indicated none.

We feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site investigated. Thank you for consulting with us.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov <<mailto:dmurdo@mt.gov>>.

Sincerely,

Damon Murdo
Cultural Records Manager

File: FWP/PARKS/2006